

May 24, 2023

19759 ACC IEEE 802.11 IX (160 MHZ, MCS11, 30pc duty cycle) WLAN	UID	Rev	Communication System Name	Group	PAR (dB)	UncE k = 2
10759 AAC IEEE 802 1124 (160 MHz, MCS1), 90pc duty cycle) WLAN	10753	AAC	IEEE 802.11ax (160 MHz, MCS10, 90pc duty cycle)			
19756 A.C. IEEE 802.11 14 (190 MPL. MCS.) 98pc day cycle)				WLAN	8.94	
19757 ACC IEEE 802.11 xt (160 MPL; MCSS) 990c duty cycle) WLAN 6.77 25.6 25.0 25.	_	_		WLAN	8.64	±9.6
10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 89pc duty cycle) WLAN 8.67 19.6 10758 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.69 19.6 10759 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.49 19.6 10750 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.49 19.6 10751 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.49 19.6 10752 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.49 19.6 10753 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.49 19.6 10754 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.44 19.6 10755 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.54 19.6 10756 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.54 19.6 10756 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.54 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.54 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty cycle) WLAN 8.51 19.6 10757 AG. IEEE 802.11 xt (160 MHz, MCSS, 199c duty c				WLAN	8.77	
1979 A.C. IEEE R0211 14 (190 MPL, MCSS, 190)C day, yello WLAN 6.58 2.50		10000		WLAN	8.77	±9.6
10.759 AAC IEEE 802.11ax (160 MHz, MCS.5, 990 cuby cycle)	0.0000000000000000000000000000000000000			WLAN	8.69	
10.786				WLAN	8.58	
10761 AAC IEEE 802.11ax (160 MHz, MCS7.99 god uby cycle)		-		WLAN	8.49	
10.782		_		WLAN	8.58	
19769 AAC IEEE 802.11 tx (160 MHz, MCS8, 99pc duty cycle)		_		WLAN	8.49	
10766 AAC EEE BOZ 11ax (160 MHz, MCS10, 99pc duty cycles) WLAN 8.54 £26				WLAN	8.53	±9.6
10766 AAC REF BOZ 11ax (160 MHz, MCS11, 1996; day; oy/e)		_		WLAN	8.54	±9.6
10767 AAE GG NR (CP-OFEM, 18 B, 5MHz, OPSK, 154Hz) SG NR FRI TDD 3.01 49.6		_		WLAN	8.54	±9.6
10766 AAD GG NR (CP-OFEM 1 RB. 15MHz, OPSK, 15MHz) GG NR FRI TIDD 8.01 219.6				WLAN	8.51	±9.6
10769 ADD SG NR (CP-OFDM, 1 RB, 15MHz, OPSK, 15MHz) SG NR FRI TIDD		_		5G NR FR1 TDD	7.99	±9.6
10770 AAD SG NR (CP-OFDM, T.RB, 20MHz, OPSK, 15MHz) SG NR FRITTID SG OZ 19.6		_		5G NR FR1 TDD	8.01	±9.6
10777 AAD SG NR (CP-OFDM, 1 RB, 325M±z, OPSK, 15k±z) SG NR FRI TIDD 8.02 19.6				5G NR FR1 TDD	8.01	±9.6
10772 AAD SG NR (CP-OFDM, 1 RB, 30MHz, QPSK, 15Hz) SG NR FR1 TDD 6.23 ±9.6				5G NR FR1 TDD	8.02	±9.6
10773 AAD SG NR (CP-OFDM, 1 RB, 50MHz, CPSK, 15Hz) SG NR FRI TDD 8.02 19.6				5G NR FR1 TDD	8.02	±9.6
10773 AAD 50 NR (CP-OFDM, 1 RB, 50MHz, OPSK, 15HHz)				5G NR FR1 TDD	8.23	±9.6
10776 AAD SG NR (CP-OFDM, 1 RB, 50MHz, OPSK, 15kHz)	10773			5G NR FR1 TDD	8.03	
10775 AAD SG NR (CP-OFDM, 50% RB, 5MHz, OPSK, 15kHz) SG NR FRI TDD 8.31 .9.5	10774			5G NR FR1 TDD	8.02	
10776 AAD SG NR (CP-OFDM, 509k, RB, 10MHz, OPSK, 15kHz)	10775			5G NR FR1 TDD	8.31	
10777 AAC SG NR (CP-OFDM, 50%, RB, 15MHz, OPSK, 15MHz)	10776	_		5G NR FR1 TDD	8.30	
10779	10777			5G NR FR1 TDD		
10779 AAC 5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 HHz)	10778	1		5G NR FR1 TDD	8.34	±9.6
10780 AAD SG NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.38 19.6 10782 AAD SG NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.31 19.6 10783 AAE SG NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.31 19.6 10784 AAD SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.31 19.6 10785 AAE SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.29 19.6 10785 AAD SG NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.40 19.6 10785 AAD SG NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.35 19.6 10786 AAD SG NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.35 19.6 10787 AAD SG NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10788 AAD SG NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10789 AAD SG NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.37 19.5 10790 AAD SG NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.37 19.6 10791 AAE SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10791 AAE SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.83 19.6 10793 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.80 19.6 10794 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10795 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10796 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10797 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10798 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.89 19.6 10799 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.89 19.6 10799 AAD SG NR (CP-OFDM, 18, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.89 19.6	10779	AAC		5G NR FR1 TDD		
10782 AAD SG NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.43 19.6 10784 AAD SG NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.29 19.6 10785 AAD SG NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.29 19.6 10786 AAD SG NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.40 19.6 10787 AAD SG NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.40 19.6 10788 AAD SG NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.44 19.6 10788 AAD SG NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10788 AAD SG NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10789 AAD SG NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10790 AAD SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10791 AAE SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 19.6 10792 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.92 29.6 10793 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.95 19.6 10794 AAD SG NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.95 19.6 10795 AAD SG NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.92 19.6 10796 AAD SG NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10797 AAD SG NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10798 AAD SG NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10799 AAD SG NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.82 19.6 10799 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.89 19.6 10799 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) SG NR FRI TDD 7.89 19.6 10799 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) SG NR FRI TDD 8.34	10780			5G NR FR1 TDD	8.38	
10782 AAD SG NR (CP-OFDM, 50% RB, 50MHz, QPSK, 15kHz) SG NR FRI TDD 8.43 4.9.6 10784 AAD SG NR (CP-OFDM, 100% RB, 50MHz, QPSK, 15kHz) SG NR FRI TDD 8.29 4.9.6 10785 AAD SG NR (CP-OFDM, 100% RB, 10MHz, QPSK, 15kHz) SG NR FRI TDD 8.29 4.9.6 10786 AAD SG NR (CP-OFDM, 100% RB, 15MHz, QPSK, 15kHz) SG NR FRI TDD 8.40 4.9.6 10787 AAD SG NR (CP-OFDM, 100% RB, 20MHz, QPSK, 15kHz) SG NR FRI TDD 8.35 4.9.6 10786 AAD SG NR (CP-OFDM, 100% RB, 20MHz, QPSK, 15kHz) SG NR FRI TDD 8.34 4.9.6 10787 AAD SG NR (CP-OFDM, 100% RB, 25MHz, QPSK, 15kHz) SG NR FRI TDD 8.34 4.9.6 10788 AAD SG NR (CP-OFDM, 100% RB, 25MHz, QPSK, 15kHz) SG NR FRI TDD 8.39 4.9.6 10789 AAD SG NR (CP-OFDM, 100% RB, 40MHz, QPSK, 15kHz) SG NR FRI TDD 8.39 4.9.6 10790 AAD SG NR (CP-OFDM, 100% RB, 40MHz, QPSK, 15kHz) SG NR FRI TDD 8.39 4.9.6 10791 AAE SG NR (CP-OFDM, 100% RB, 50MHz, QPSK, 15kHz) SG NR FRI TDD 7.83 4.9.6 10792 AAD SG NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30kHz) SG NR FRI TDD 7.92 4.9.6 10793 AAD SG NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30kHz) SG NR FRI TDD 7.92 4.9.6 10794 AAD SG NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30kHz) SG NR FRI TDD 7.92 4.9.6 10795 AAD SG NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30kHz) SG NR FRI TDD 7.82 4.9.6 10796 AAD SG NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30kHz) SG NR FRI TDD 7.82 4.9.6 10797 AAD SG NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30kHz) SG NR FRI TDD 7.82 4.9.6 10798 AAD SG NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30kHz) SG NR FRI TDD 7.82 4.9.6 10799 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30kHz) SG NR FRI TDD 7.82 4.9.6 10799 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30kHz) SG NR FRI TDD 7.89 4.9.6 10799 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30kHz) SG NR FRI TDD 7.89 4.9.6 10799 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30kHz) SG NR FRI TDD 8.34 4.9.6 10	10781			5G NR FR1 TDD	8.38	±9.6
10784 AAD SG NR (CP-OFDM, 100% RB, 10MHz, QPSK, 15kHz) SG NR FR1 TDD 8.29 19.6	10782			5G NR FR1 TDD	8.43	
10785 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz) 5G NR FRI TDD 8.40 ±9.6	10783		5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	
10786 AAD SG NR (CP-OFDM, 100% RB, 15MHz, QPSK, 15kHz)	10784			5G NR FR1 TDD	8.29	±9.6
10787 AAD 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) SG NR FR1 TDD 8.44 ±9.6	10785	1000	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	
10787 AAD SG NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) SG NR FRI TDD 8.39 ±9.6	10786	AAD		5G NR FR1 TDD	8.35	
10789 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) 5G NR FR1 TDD 8.37	10787		5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	±9.6
10789 AAD SG NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) SG NR FR1 TDD 8.37 ±9.6	10788	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
1979 AAE 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.83 ±9.6	10789	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	
10791 AAE SG NR (CP-OFDM, 1 RB, 50MHz, QPSK, 30kHz) SG NR FR1 TDD 7.83 ±9.6	10790	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	
10792 AAD SG NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.92 ±9.6 10793 AAD SG NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.95 ±9.6 10794 AAD SG NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.82 ±9.6 10795 AAD SG NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.82 ±9.6 10796 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.82 ±9.6 10797 AAD SG NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.82 ±9.6 10798 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.01 ±9.6 10799 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.89 ±9.6 10799 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.93 ±9.6 10801 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.89 ±9.6 10802 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.87 ±9.6 10803 AAD SG NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.87 ±9.6 10803 AAD SG NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) SG NR FR1 TDD 7.87 ±9.6 10805 AAD SG NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.34 ±9.6 10806 AAD SG NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.34 ±9.6 10807 AAD SG NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.34 ±9.6 10808 AAD SG NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.34 ±9.6 10809 AAD SG NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.34 ±9.6 10810 AAD SG NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.34 ±9.6 10811 AAD SG NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.35 ±9.6 10812 AAD SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.35 ±9.6 10813 AAD SG NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) SG NR FR1 TDD 8.35 ±9.6	10791	AAE	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	
10794 AAD SG NR (CP-OFDM, 1 RB, 20 MHz, OPSK, 30 kHz) SG NR FR1 TDD 7.82 49.6	10792		5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±9.6
19.50 19.5	10793	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	
10795 AAD 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.84 ±9.6	10794	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
19.50 19.7	10795	AAD		5G NR FR1 TDD	7.84	
10797 AAD 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.89 ±9.6 10798 AAD 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.89 ±9.6 10799 AAD 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.89 ±9.6 10801 AAD 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.87 ±9.6 10802 AAD 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.87 ±9.6 10803 AAD 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.93 ±9.6 10805 AAD 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.93 ±9.6 10806 AAD 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10806 AAD 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10809 AAD 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10810 AAD 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10811 AAD 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10812 AAD 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10813 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10814 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10815 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10816 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10817 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10818 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10821 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10822 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 T	10796		5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	
10798 AAD 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.89 ±9.6	10797	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	
10799 AAD 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.93 ±9.6	10798					
10801 AAD 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.89 ±9.6 10802 AAD 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.87 ±9.6 10803 AAD 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.93 ±9.6 10805 AAD 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10806 AAD 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10809 AAD 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10810 AAD 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10812 AAD 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10813 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10814 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10815 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10816 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10817 AAE 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10818 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10821 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10822 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10823 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10824 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10825 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	10799		5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	
10802 AAD 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.87 ±9.6 10803 AAD 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.93 ±9.6 10805 AAD 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10806 AAD 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.37 ±9.6 10809 AAD 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10810 AAD 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10812 AAD 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10813 AAD 5G NR (CP-OFDM, 100% RB, 5MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10814 AAD 5G NR (CP-OFDM, 100% RB, 5MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10819 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.33 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.33 ±9.6 10821 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.30 ±9.6 10822 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.30 ±9.6 10823 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10823 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10824 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10825 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10827 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	10801	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)			
10803 AAD 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 7.93 ±9.6 10805 AAD 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10806 AAD 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10809 AAD 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10810 AAD 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10812 AAD 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10813 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10814 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10815 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10816 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.30 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.30 ±9.6 10821 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10822 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10822 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.36 ±9.6 10823 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10824 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10825 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10827 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30	10802			5G NR FR1 TDD		Total Contract of the Contract
1985 AAD 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6	10803					-
1806 AAD 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 6.37 ±9.6	10805	AAD				
10809 AAD 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10810 AAD 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10812 AAD 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10817 AAE 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10818 AAD 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10819 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.33 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.30 ±9.6 10821 AAD 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10822 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10823 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10824 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10825 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.49 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10827 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10827 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK,	10806	AAD				1
10810 AAD 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10812 AAD 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10817 AAE 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 10818 AAD 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 10819 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.33 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.30 ±9.6 10821 AAD 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10822 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10823 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10824 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10825 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 10827 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.49 ±9.6 10826 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.49 ±9.6 10827 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10828 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 10820 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK	10809	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)			
0812 AAD 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 0817 AAE 5G NR (CP-OFDM, 100% RB, 5MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 0818 AAD 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 0819 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.33 ±9.6 0820 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.30 ±9.6 0821 AAD 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0822 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0823 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.36 ±9.6 0824 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 0825 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 0826 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0827 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0826 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0827 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0828 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 T	10810	AAD				110000000000000000000000000000000000000
0817 AAE 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.35 ±9.6 0818 AAD 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.34 ±9.6 0819 AAD 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.33 ±9.6 0820 AAD 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0821 AAD 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0822 AAD 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0823 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.36 ±9.6 0824 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 0825 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0827 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0827	10812	AAD				
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0823 AAD 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.36 ±9.6 0824 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 0825 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0827 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6	10822	AAD				
0824 AAD 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.39 ±9.6 0825 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0827 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6 0829 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6	10823	AAD				
0825 AAD 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.41 ±9.6 0827 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6	10824					
0827 AAD 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 8.42 ±9.6	10825					
ASSO AND SOMEONE AND SOMEON DE CONTRACTOR OF	10827					
	10828	AAD	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6

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UID	Rev	Communication System Name	Group	PAR (dB)	UncE k =
0829	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.40	±9.6
0830	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.63	±9.6
0831	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	±9.6
0832	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	±9.6
0833	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
0834	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	
0835	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD		±9.6
0836	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
0837	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)		7.66	±9.6
0839	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6
0840	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
0841	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	±9.6
0843	AAD		5G NR FR1 TDD	7.71	±9.6
0844	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6
0846		5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
0854	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
0855	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
0856	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
0857	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
0858	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
0859	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
0860	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
0861	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	
0863	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD		±9.6
0864	AAD	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)		8.41	±9.6
0865	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
0866	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
0868	AAD		5G NR FR1 TDD	5.68	±9.6
		5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	±9.6
0869	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
0870	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	±9.6
0871	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
0872	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6
0873	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
0874	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
0875	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
0876	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	±9.6
0877	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	
0878	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD		±9.6
0879	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)		8.41	±9.6
0880	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6
0881	AAE		5G NR FR2 TDD	8.38	±9.6
0882	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
		5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	±9.6
0883	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6
0884	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	±9.6
0885	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
0886	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
0887	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
8880	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6
0889	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6
890	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	±9.6
0891	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6
0892	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	
0897	AAC	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)			±9.6
0898	AAB	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	±9.6
0899	AAB	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
0900	AAB		5G NR FR1 TDD	5.67	±9.6
		5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
0901	AAB	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
0902	AAB	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
0903	AAB	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
	AAB	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
0903	AAB	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
	VVD				
0904	AAB	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5 68	
0904 0905			5G NR FR1 TDD	5.68	±9.6
0904 0905 0906 0907	AAB AAC	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
0904 0905 0906	AAB				

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10044	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
10911	AAB	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10912	AAB	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10913	AAB	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10914	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	±9.6
10915	AAB	5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6
10916	AAB	5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10917	AAB	5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10918	AAC	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10919	AAB	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10920	AAB	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10921	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10922	AAB	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	±9.6
10923	AAB	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10924	AAB	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10925	AAB	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±9.6
10926	AAB	5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10927	AAB	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10928	AAC	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10929	AAC	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10930	AAC	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10931	AAC	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10932	AAC	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10933	AAC	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10934	AAC	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10935	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.90	±9.6
10937	AAC	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	±9.6
10938	AAC	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±9.6
10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	±9.6
10940	AAC	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	±9.6
10941	AAC	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10942	AAC	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10943	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	±9.6
10944	AAC	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	±9.6
10945	AAC	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10947	AAC	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10948	AAC	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10949	AAC	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10950	AAC	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10951	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	±9.6
10952	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.25	±9.6
10953	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.15	±9.6
10954	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.23	±9.6
10955	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.42	±9.6
10956	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	±9.6
		5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	50 NO 504 505	8.31	±9.6
10957			5G NR FR1 FDD	0.01	13.0
10958	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.61	±9.6
10958 10959	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD 5G NR FR1 FDD	8.61 8.33	
10958 10959 10960	AAA AAA AAC	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD	8.61	±9.6
10958 10959 10960 10961	AAA AAA AAC AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD 5G NR FR1 TDD	8.61 8.33	±9.6 ±9.6
10958 10959 10960 10961 10962	AAA AAC AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD 5G NR FR1 TDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40	±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963	AAA AAC AAB AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD 5G NR FR1 TDD 5G NR FR1 TDD 5G NR FR1 TDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55	±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964	AAA AAC AAB AAB AAB AAC	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29	±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965	AAA AAC AAB AAB AAB AAC AAC	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966	AAA AAC AAB AAB AAB AAC AAB AAC	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967	AAA AAC AAB AAB AAB AAC AAB AAC	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968	AAA AAC AAB AAB AAB AAC AAB AAB AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968 10972	AAA AAC AAB AAB AAB AAC AAB AAB AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968 10972 10973	AAA AAC AAB AAB AAC AAB AAC AAB AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR (DF-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49 11.59 9.06	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968 10972 10973 10974	AAA AAC AAB AAB AAC AAB AAC AAB AAC AAB AAC AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR (CP-OFDM, TM 3.1, 100 MHz, QPSK, 30 kHz) 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968 10972 10973 10974	AAA AAC AAB AAB AAB AAB AAB AAB AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) ULLA BDR	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD ULLA	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49 11.59 9.06	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968 10972 10973 10974 10978 10979	AAA AAA AAC AAB AAB AAC AAB AAC AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) ULLA BDR ULLA HDR4	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD ULLA ULLA	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49 11.59 9.06 10.28 1.16 8.58	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968 10972 10973 10974 10978 10979	AAA AAA AAB AAB AAB AAB AAB AAB AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) ULLA BDR ULLA HDR4 ULLA HDR4	5G NR FR1 FDD 5G NR FR1 TDD ULLA ULLA	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49 11.59 9.06 10.28 1.16 8.58	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10958 10959 10960 10961 10962 10963 10964 10965 10966 10967 10968 10972 10973 10974	AAA AAA AAC AAB AAB AAC AAB AAC AAB AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) ULLA BDR ULLA HDR4	5G NR FR1 FDD 5G NR FR1 FDD 5G NR FR1 TDD ULLA ULLA	8.61 8.33 9.32 9.36 9.40 9.55 9.29 9.37 9.55 9.42 9.49 11.59 9.06 10.28 1.16 8.58	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6

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10983	AAA	Communication System Name	Group	PAR (dB)	Unc ^E k = 2
10984	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10985	-	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	
10985	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAA	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
0988	AAA	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
	AAA	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	±9.6
10990	AAA	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6
1003	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	10.24	±9.6
1004	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	10.73	±9.6
1005	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.70	±9.6
1006	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.55	±9.6
1007	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD		±9.6
1008	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.46	±9.6
1009	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.51	±9.6
1010	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.76	±9.6
1011	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.95	±9.6
1012	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.96	±9.6
1013	AAA	IEEE 802.11be (320 MHz, MCS1, 99pc duty cycle)	WLAN	8.68	±9.6
1014	AAA	IEEE 802.11be (320 MHz, MCS2, 99pc duty cycle)	WLAN	8.47	±9.6
1015	AAA	IEEE 802.11be (320 MHz, MCS3, 99pc duty cycle)	WLAN	8.45	±9.6
1016	AAA	IEEE 802.11be (320 MHz, MCS4, 99pc duty cycle)	WLAN	8.44	±9.6
1017	AAA	IEEE 802.11be (320 MHz, MCS5, 99pc duty cycle)		8.44	±9.6
1018	AAA	IEEE 802.11be (320 MHz, MCS6, 99pc duty cycle)	WLAN	8.41	±9.6
1019	AAA	IEEE 802.11be (320 MHz, MCS7, 99pc duty cycle)	WLAN	8.40	±9.6
1020	AAA	IEEE 802.11be (320 MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6
1021	AAA	IEEE 802.11be (320 MHz, MCS9, 99pc duty cycle)	WLAN	8.27	±9.6
1022	AAA	IEEE 802.11be (320 MHz, MCS10, 99pc duty cycle)	WLAN	8.46	±9.6
1023	AAA	IEEE 802.11be (320 MHz, MCS11, 99pc duty cycle)	WLAN	8.36	±9.6
1024	AAA	IEEE 802.11be (320 MHz, MCS12, 99pc duty cycle)	WLAN	8.09	±9.6
1025	AAA	IEEE 802.11be (320 MHz, MCS13, 99pc duty cycle)	WLAN	8.42	±9.6
1026	AAA	IEEE 802.11be (320 MHz, MCS0, 99pc duty cycle)	WLAN	8.37	±9.6
		(220 Mil Iz, MOSO, SSPC duty cycle)	WLAN	8.39	±9.6

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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ANNEX E DIPOLE CALIBRATION CERTIFICATE

Dipole 835 MHz

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Service suisse d'étalonnage Servizio svizzero di taratura **Swiss Calibration Service**

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client CTTL

Beiiina

Certificate No. CD835V3-1023_Aug23

Object	CD835V3 - SN: 1	023	
Calibration procedure(s)	QA CAL-20.v7 Calibration Proce	dure for Validation Sources in air	
Calibration date:	August 15, 2023		
The measurements and the uncertar	ainties with confidence pr	onal standards, which realize the physical unit obability are given on the following pages and y facility: environment temperature $(22 \pm 3)^{\circ}$ C	d are part of the certificate.
Calibration Equipment used (M&TE Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
	SN: 4013	30-Dec-22 (No. EF3-4013_Dec22)	Dec-23
		00 B00 EE (110: E1 0 10:0_B00EE)	
Probe EF3DV3 DAE4	SN: 781	03-Jan-23 (No. DAE4-781_Jan23)	Jan-24
Probe EF3DV3 DAE4		03-Jan-23 (No. DAE4-781_Jan23) Check Date (in house)	Jan-24 Scheduled Check
Probe EF3DV3	SN: 781		
Probe EF3DV3 DAE4 Secondary Standards	SN: 781	Check Date (in house)	Scheduled Check
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B Power sensor HP E4412A	SN: 781 ID # SN: GB42420191	Check Date (in house) 09-Oct-09 (in house check Oct-20)	Scheduled Check In house check: Oct-23
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B	ID # SN: GB42420191 SN: US38485102	Check Date (in house) 09-Oct-09 (in house check Oct-20) 05-Jan-10 (in house check Oct-20)	Scheduled Check In house check: Oct-23 In house check: Oct-23
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B Power sensor HP E4412A Power sensor HP 8482A	ID # SN: GB42420191 SN: US38485102 SN: US37295597	Check Date (in house) 09-Oct-09 (in house check Oct-20) 05-Jan-10 (in house check Oct-20) 09-Oct-09 (in house check Oct-20)	Scheduled Check In house check: Oct-23 In house check: Oct-23 In house check: Oct-23
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B Power sensor HP E4412A Power sensor HP 8482A RF generator R&S SMT-06	ID # SN: GB42420191 SN: US38485102 SN: US37295597 SN: 837633/005	Check Date (in house) 09-Oct-09 (in house check Oct-20) 05-Jan-10 (in house check Oct-20) 09-Oct-09 (in house check Oct-20) 10-Jan-19 (in house check Oct-20)	Scheduled Check In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-23
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B Power sensor HP E4412A Power sensor HP 8482A RF generator R&S SMT-06	ID # SN: GB42420191 SN: US38485102 SN: US37295597 SN: 837633/005 SN: US41080477	Check Date (in house) 09-Oct-09 (in house check Oct-20) 05-Jan-10 (in house check Oct-20) 09-Oct-09 (in house check Oct-20) 10-Jan-19 (in house check Oct-20) 31-Mar-14 (in house check Oct-22)	Scheduled Check In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-24
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B Power sensor HP E4412A Power sensor HP 8482A RF generator R&S SMT-06 Network Analyzer Agilent E8358A	ID # SN: GB42420191 SN: US38485102 SN: US37295597 SN: 837633/005 SN: US41080477 Name	Check Date (in house) 09-Oct-09 (in house check Oct-20) 05-Jan-10 (in house check Oct-20) 09-Oct-09 (in house check Oct-20) 10-Jan-19 (in house check Oct-20) 31-Mar-14 (in house check Oct-22) Function	Scheduled Check In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-24
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B Power sensor HP E4412A Power sensor HP 8482A RF generator R&S SMT-06 Network Analyzer Agilent E8358A	ID # SN: GB42420191 SN: US38485102 SN: US37295597 SN: 837633/005 SN: US41080477 Name	Check Date (in house) 09-Oct-09 (in house check Oct-20) 05-Jan-10 (in house check Oct-20) 09-Oct-09 (in house check Oct-20) 10-Jan-19 (in house check Oct-20) 31-Mar-14 (in house check Oct-22) Function	Scheduled Check In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-24
Probe EF3DV3 DAE4 Secondary Standards Power meter Agilent 4419B Power sensor HP E4412A Power sensor HP 8482A RF generator R&S SMT-06 Network Analyzer Agilent E8358A	ID # SN: GB42420191 SN: US38485102 SN: US37295597 SN: 837633/005 SN: US41080477 Name	Check Date (in house) 09-Oct-09 (in house check Oct-20) 05-Jan-10 (in house check Oct-20) 09-Oct-09 (in house check Oct-20) 10-Jan-19 (in house check Oct-20) 31-Mar-14 (in house check Oct-22) Function	Scheduled Check In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-23 In house check: Oct-24

Certificate No: CD835V3-1023_Aug23

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Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

References

 ANSI-C63.19-2019 (ANSI-C63.19-2011)
 American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

Methods Applied and Interpretation of Parameters:

- Coordinate System: y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna
 (mounted on the table) towards its feed point between the two dipole arms. x-axis is normal to the other axes.
 In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a
 distance of 15 mm above the top metal edge of the dipole arms.
- Measurement Conditions: Further details are available from the hardcopies at the end of the certificate. All
 figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector
 is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a
 directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- Antenna Positioning: The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- Feed Point Impedance and Return Loss: These parameters are measured using a Vector Network Analyzer.
 The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminating by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- E-field distribution: E field is measured in the x-y-plane with an isotropic E-field probe with 100 mW forward power to the antenna feed point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the
coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%

Certificate No: CD835V3-1023_Aug23	Page 2 of 5	



Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, $dy = 5 mm$	
Frequency	835 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

Maximum Field values at 835 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	113.4 V/m = 41.09 dBV/m
Maximum measured above low end	100 mW input power	110.5 V/m = 40.87 dBV/m
Averaged maximum above arm	100 mW input power	112.0 V/m ± 12.8 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters

Frequency	Return Loss	Impedance	
800 MHz	17.0 dB	40.3 Ω - 8.3 jΩ	
835 MHz	23.2 dB	$52.9 \Omega + 6.5 j\Omega$	
880 MHz	16.4 dB	61.6 Ω - 12.6 jΩ	
900 MHz	16.8 dB	51.3 Ω - 14.8 jΩ	
945 MHz	23.4 dB	45.2 Ω + 4.3 jΩ	

3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

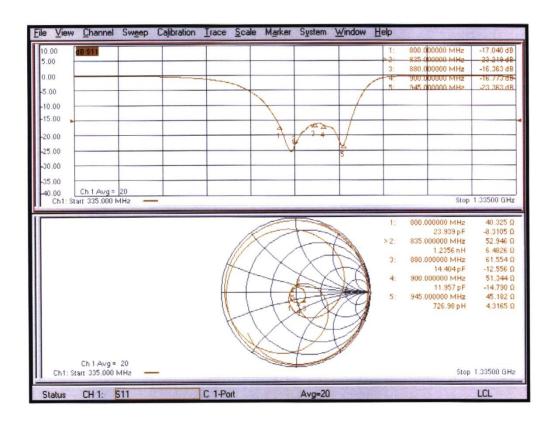
Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

Certificate No: CD835V3-1023_Aug23	Page 3 of 5	



Impedance Measurement Plot



Certificate No: CD835V3-1023_Aug23 Page 4 of 5



DASY5 E-field Result

Date: 15.08.2023

Test Laboratory: SPEAG Lab2

DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: CD835V3 - SN: 1023

Communication System: UID 0 - CW ; Frequency: 835 MHz Medium parameters used: $\sigma=0$ S/m, $\epsilon_r=1$; $\rho=0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EF3DV3 - SN4013; ConvF(1, 1, 1) @ 835 MHz; Calibrated: 30.12.2022

Sensor-Surface: (Fix Surface)

• Electronics: DAE4 Sn781; Calibrated: 03.01.2023

Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070

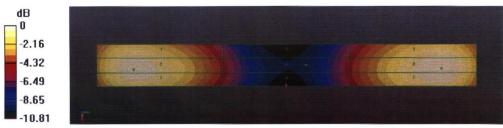
DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole E-Field measurement @ 835MHz/E-Scan - 835MHz d=15mm/Hearing Aid Compatibility Test (41x361x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm Device Reference Point: 0, 0, -6.3 mm Reference Value = 132.8 V/m; Power Drift = -0.00 dB Applied MIF = 0.00 dB RF audio interference level = 41.09 dBV/m Emission category: M3

MIF scaled E-field

Grid 1 M3 40.84 dBV/m	
Grid 4 M4 35.82 dBV/m	C-100
Grid 7 M3 41.05 dBV/m	



0 dB = 113.4 V/m = 41.09 dBV/m

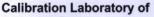
Certificate No: CD835V3-1023_Aug23

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Dipole 1880 MHz



Schmid & Partner **Engineering AG**

Zeughausstrasse 43, 8004 Zurich, Switzerland





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Client CTTL

Beijing

Certificate No. CD1880V3-1018_Aug23

CALIBRATION CERTIFICATE

CD1880V3 - SN: 1018 Object

Calibration procedure(s)

Calibration Procedure for Validation Sources in air

August 15, 2023 Calibration date:

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
Probe EF3DV3	SN: 4013	30-Dec-22 (No. EF3-4013_Dec22)	Dec-23
DAE4	SN: 781	03-Jan-23 (No. DAE4-781_Jan23)	Jan-24

Secondary Standards	ID#	Check Date (in house)	Scheduled Check
Power meter Agilent 4419B	SN: GB42420191	09-Oct-09 (in house check Oct-20)	In house check: Oct-23
Power sensor HP E4412A	SN: US38485102	05-Jan-10 (in house check Oct-20)	In house check: Oct-23
Power sensor HP 8482A	SN: US37295597	09-Oct-09 (in house check Oct-20)	In house check: Oct-23
RF generator R&S SMT-06	SN: 837633/005	10-Jan-19 (in house check Oct-20)	In house check: Oct-23
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24

Quality Manager

Function Laboratory Technician Calibrated by:

Niels Kuster

Issued: August 17, 2023

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Certificate No: CD1880V3-1018_Aug23

Approved by:

Page 1 of 5





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References

ANSI-C63.19-2019 (ANSI-C63.19-2011) American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

Methods Applied and Interpretation of Parameters:

- Coordinate System: y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna (mounted on the table) towards its feed point between the two dipole arms. x-axis is normal to the other axes. In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a distance of 15 mm above the top metal edge of the dipole arms.
- Measurement Conditions: Further details are available from the hardcopies at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- Antenna Positioning: The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the
- Feed Point Impedance and Return Loss: These parameters are measured using a Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminating by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- E-field distribution: E field is measured in the x-y-plane with an isotropic E-field probe with 100 mW forward power to the antenna feed point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any nonparallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the
coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%

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Certificate No: CD1880V3-1018_Aug23





Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, dy = 5 mm	
Frequency	1880 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

Maximum Field values at 1880 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	87.2 V/m = 38.81 dBV/m
Maximum measured above low end	100 mW input power	85.4 V/m = 38.63 dBV/m
Averaged maximum above arm	100 mW input power	86.3 V/m ± 12.8 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters

Frequency	Return Loss	Impedance
1730 MHz	28.3 dB	54.0 Ω - 0.5 jΩ
1880 MHz	23.1 dB	55.4 Ω + 5.1 jΩ
1900 MHz	22.9 dB	56.8 Ω + 3.4 jΩ
1950 MHz	30.8 dB	52.8 Ω - 1.0 jΩ
2000 MHz	20.0 dB	48.5 Ω + 9.8 jΩ

3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

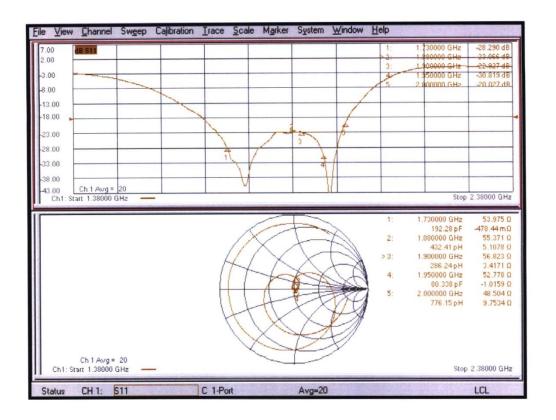
Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

Certificate No: CD1880V3-1018_Aug23



Impedance Measurement Plot



Certificate No: CD1880V3-1018_Aug23

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DASY5 E-field Result

Date: 15.08.2023

Test Laboratory: SPEAG Lab2

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: CD1880V3 - SN: 1018

Communication System: UID 0 - CW ; Frequency: 1880 MHz Medium parameters used: $\sigma=0$ S/m, $\epsilon_r=1$; $\rho=0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EF3DV3 SN4013; ConvF(1, 1, 1) @ 1880 MHz; Calibrated: 30.12.2022
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 03.01.2023
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole E-Field measurement @ 1880MHz - E-Scan - 1880MHz d=15mm/Hearing Aid Compatibility Test (41x181x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 150.8 V/m; Power Drift = 0.01 dB
Applied MIF = 0.00 dB
RF audio interference level = 38.81 dBV/m
Emission category: M2

MIF scaled E-field

Grid 2 M2 38.81 dBV/m	
Grid 5 M2 36.09 dBV/m	
Grid 8 M2 38.63 dBV/m	



0 dB = 87.25 V/m = 38.81 dBV/m

Certificate No: CD1880V3-1018_Aug23

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Dipole 2600 MHz

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Accredited by the Swiss Accreditation Service (SAS)

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Client CTTL Beijing Certificate No. CD2600V3-1017_Aug23

CALIBRATION CERTIFICATE

Object CD2600V3 - SN: 1017

Calibration procedure(s) QA CAL-20.v7

Calibration Procedure for Validation Sources in air

Calibration date: August 15, 2023

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Calibration Equipment used (M&TE	critical for calibration)		
Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
Probe EF3DV3	SN: 4013	30-Dec-22 (No. EF3-4013_Dec22)	Dec-23
DAE4	SN: 781	03-Jan-23 (No. DAE4-781_Jan23)	Jan-24
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Secondary Standards	ID#	Check Date (in house)	Scheduled Check
Power meter Agilent 4419B	SN: GB42420191	09-Oct-09 (in house check Oct-20)	In house check: Oct-23
Power sensor HP E4412A	SN: US38485102	05-Jan-10 (in house check Oct-20)	In house check: Oct-23
Power sensor HP 8482A	SN: US37295597	09-Oct-09 (in house check Oct-20)	In house check: Oct-23
RF generator R&S SMT-06	SN: 837633/005	10-Jan-19 (in house check Oct-20)	In house check: Oct-23
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
			روا
Approved by:	Niels Kuster	Quality Manager	

Issued: August 17, 2023

Certificate No: CD2600V3-1017_Aug23

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References

[1] ANSI-C63.19-2019 (ANSI-C63.19-2011)
American National Standard, Methods of Measurement of Compatibility between Wireless Communications
Devices and Hearing Aids.

Methods Applied and Interpretation of Parameters:

- Coordinate System: y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna
 (mounted on the table) towards its feed point between the two dipole arms. x-axis is normal to the other axes.
 In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a
 distance of 15 mm above the top metal edge of the dipole arms.
- Measurement Conditions: Further details are available from the hardcopies at the end of the certificate. All
 figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector
 is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a
 directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- Antenna Positioning: The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- Feed Point Impedance and Return Loss: These parameters are measured using a Vector Network Analyzer.
 The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminating by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- E-field distribution: E field is measured in the x-y-plane with an isotropic E-field probe with 100 mW forward power to the antenna feed point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: CD2600V3-1017_Aug23 Page 2 of 5



Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, dy = 5 mm	
Frequency	2600 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

Maximum Field values at 2600 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	86.3 V/m = 38.72 dBV/m
Maximum measured above low end	100 mW input power	85.4 V/m = 38.63 dBV/m
Averaged maximum above arm	100 mW input power	85.8 V/m ± 12.8 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters

Frequency	Return Loss	Impedance
2450 MHz	25.2 dB	44.9 Ω +1.0 jΩ
2550 MHz	22.5 dB	$57.4 \Omega + 3.1 j\Omega$
2600 MHz	20.8 dB	59.0 Ω - 4.1 jΩ
2650 MHz	19.8 dB	55.2 Ω - 9.5 jΩ
2750 MHz	15.9 dB	41.9 Ω - 12.4 jΩ

3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

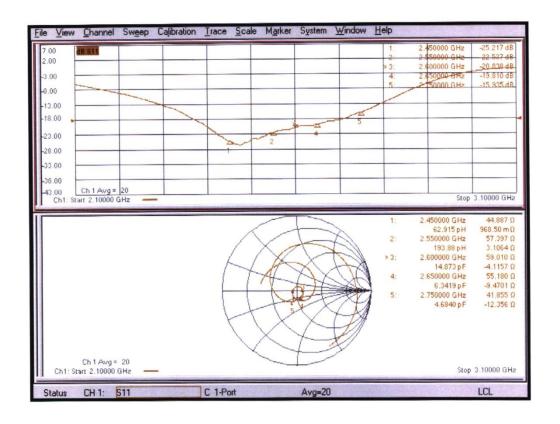
Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

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Impedance Measurement Plot



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DASY5 E-field Result

Date: 15.08.2023

Test Laboratory: SPEAG Lab2

DUT: HAC Dipole 2600 MHz; Type: CD2600V3; Serial: CD2600V3 - SN: 1017

Communication System: UID 0 - CW; Frequency: 2600 MHz Medium parameters used: $\sigma=0$ S/m, $\epsilon_r=1;$ $\rho=0$ kg/m^3

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EF3DV3 - SN4013; ConvF(1, 1, 1) @ 2600 MHz; Calibrated: 30.12.2022

• Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn781; Calibrated: 03.01.2023

Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070

DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole E-Field measurement @ 2600MHz/E-Scan - 2600MHz d=15mm/Hearing Aid Compatibility Test (41x181x1):

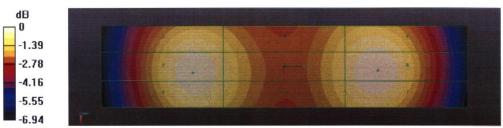
Interpolated grid: dx=0.5000 mm, dy=0.5000 mm Device Reference Point: 0, 0, -6.3 mm Reference Value = 69.31 V/m; Power Drift = 0.01 dB Applied MIF = 0.00 dB

RF audio interference level = 38.72 dBV/m

Emission category: M2

MIF scaled E-field

Grid 1 M2 38.58 dBV/m	
Grid 4 M2 37.99 dBV/m	
Grid 7 M2 38.64 dBV/m	



0 dB = 86.27 V/m = 38.72 dBV/m

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The photos of HAC test are presented in the additional document:

Appendix to test report No.23T04Z80206-30/31

The photos of HAC test